

Issuance Date: April 3, 2003  
Effective Date: April 15, 2003  
Expiration Date: April 15, 2008

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM  
WASTE DISCHARGE PERMIT No. WA-000025-6

State of Washington  
DEPARTMENT OF ECOLOGY  
Olympia, Washington 98504-7600

In compliance with the provisions of  
The State of Washington Water Pollution Control Law  
Chapter 90.48 Revised Code of Washington  
and  
The Federal Water Pollution Control Act  
(The Clean Water Act)  
Title 33 United States Code, Section 1251 et seq.

Fort James Camas L.L.C.  
Camas, Washington

<u>Facility Location:</u> Camas, Washington	<u>Receiving Water:</u> Columbia River
<u>Water Body I.D. No.:</u> Segment No. 26WRIA99 WA-CR-1010	<u>Discharge Location:</u> Latitude: 45° 34' 15" N Longitude: 122° 24' 45" W
<u>Industry Type:</u> Kraft Pulp and Paper Mill	

is authorized to discharge in accordance with the special and general conditions which follow.

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Carol Kreage, P.E.  
Industrial Section Manager  
Washington State Department of Ecology

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## SUMMARY OF PERMIT REPORT SUBMITTALS

Refer to the Special and General Conditions of this permit for additional submittal requirements.

Permit Section	Submittal	Frequency	Submittal Date
S1.D	Dilution Ratio Study Update	1/permit cycle	Within 3 years from the permit's effective date
S1.E	Temperature Study	1/permit cycle	Within 4 years from the permit's effective date
S1.F	TCF Feasibility Analysis	1/permit cycle	Within 36 months of permit's effective date
S1.G	Priority Pollutant Testing	1/permit cycle	18 months after 100% Chlorine substitution
S2.A	Discharge Monitoring Report	Monthly	15 <sup>th</sup> day after the monitoring period
S3.A	Treatment System Operating Plan	Update every permit cycle	Within 6 months of permit's effective date
S3.A.7	Treatment System Adequacy Demonstration	1/permit cycle	October 16, 2002
S4.C	Solid Waste Control Plan	1/permit cycle	Within 3 years and 6 months from permit's effective date
S7.	Spill Plan	Update every permit cycle	Within 6 months from permit's effective date
S8.	Best Management Practices Plan Certification	1/permit cycle	Within 3 months from permit's effective date
S9.	Receiving Water Study Plan	1/permit cycle	Within 3 years and 6 months from the permit's effective date
S9.	Receiving Water Study Report	1/permit cycle	Within 90 days of completing Receiving Water Study

Permit Section	Submittal	Frequency	Submittal Date
S10.A	Acute Toxicity Effluent Characterization Test	1 every other month for one year	Testing on or before 60 days of affective date. Submit report within 60 days of post sampling date/60 days after each subsequent sampling event
S.10.A	Final Acute Toxicity Effluent Characterization Summary Report	1/permit cycle	90 days following the last characterization sampling event
S11.A	Chronic Toxicity Effluent Characterization Test	Quarterly for one year	Submit report within 60 days of permit effective date/60 days after each subsequent sampling event
S11.A	Final Chronic Toxicity Effluent Characterization Summary Report	1/permit cycle	90 days following the last characterization sampling event
S12.	Outfall Evaluation	1/permit cycle	Within 4 years and 6 months from the permit's effective date
G7.	Application for permit renewal	1/permit cycle	within 4 years and 6 months from the permit's effective date

## BASIS OF PRODUCTION BASED EFFLUENT LIMITATIONS

The effluent limitations for the pulp and paper mill discharge are based on:

- \* New Source Performance Standards (NSPS) as promulgated by EPA on December 17, 1986, for production increases (BCT Kraft Bleached Paper Grade and Non-Integrated Tissue categories) resulting from the Permittee's modernization project completed in 1984.
- \* Best Conventional Technology (BCT) as promulgated by EPA on December 17, 1986 or April 15, 1998, whichever more restrictive, for a portion of, or all production within the following categories:
  - BCT Kraft Bleached Paper Grade
  - Wastepaper Tissue

The specific amounts of each production, their allocation within each category, and the basis of their effluent limitations are listed in the following table ("Numeric Basis of Effluent Limitations").

### NUMERIC BASIS OF PRODUCTION BASED EFFLUENT LIMITS

On the issue date of the permit, the effluent limitations are calculated from the following off-the-machine production rates:

Category	Off-Machine Production (Tons/Day)	Basis	BOD		TSS	
			Monthly Average	Daily Max	Monthly Average	Daily Max
Kraft Bleached Paper Grade (B)	271	NSPS	9.2	17.0	15.2	29.2
Kraft Bleached Paper Grade (B)	1067	BCT	11.0	21.2	23.8	44.3
Wastepaper Tissue (J)	14	BCT	14.2	27.4	18.4	34.1
Non-Integrated Tissue (L)	30	NSPS	6.8	14.0	5.2	12.0
Total	1382					

Table I. PRODUCTION DERIVED LIMITS AT THE BASE RATE

BOD						
Production Unit	ADT/Day	Basis for	Monthly	Monthly Avg.	Daily	Daily Max
	(Off-Machine)	Limit	Avg. (#/Ton)	#/Day	Max (#/Ton)	#/Day
Kraft Bleached Paper Grade	271	NSPS	9.2	2,493.2	17.0	4,607.0
Kraft Bleached Paper Grade	1,067	BCT	11.0	11,737.0	21.2	22,620.4

Wastepaper Tissue	14	BCT	14.2	198.8	27.4	383.6
Non-Integrated Tissue (L)	30	NSPS	6.8	204.0	14.0	420.0
<b>Totals<sup>(1)</sup></b>	<b>1382</b>			<b>14,633</b>		<b>28,031</b>

#### TSS

Production Unit	ADT/Day (Off-mach)	Basis for Limit	Monthly Avg. (#/Ton)	Monthly Avg. #/Day	Daily Max #/Ton	Daily Max #/Day
Kraft Bleached Paper Grade	271	NSPS	15.2	4,119.2	29.2	7,913.2
Kraft Bleached Paper Grade	1,067	BCT	23.8	25,394.6	44.3	47,268.1
Wastepaper Tissue	14	BCT	18.4	257.6	34.1	477.4
Non-Integrated Tissue (L)	30	NSPS	5.2	156.0	12.0	360.0
<b>Totals<sup>(1)</sup></b>	<b>1382</b>			<b>29,927</b>		<b>56,019</b>

<sup>(1)</sup> Production rates were determined by the average continuous production rate reported during the last three year.

#### Non-Conventional Pollutants

Best Available Technology (BAT) as denoted in 40 CFR Part 430 Subpart B for the bleached pulp and fine paper.

#### EFFLUENT LIMITATIONS TABLE

Grade (Subcategory)	Basis	AOX (Lbs./ADT)		Chloroform (Lbs./ADT)	
		Monthly Average	Daily Max.	Monthly Average	Daily Max.
Unbleached Kraft Pulp (B)	BAT	1.246	1.902	0.00828	0.01384

PRODUCTION BASIS

The discharge limitations for AOX and chloroform shall be determined as defined by EPA in 40 CFR Part 430.01(n)(2). This definition calls for the limitation to be on the basis of unbleached pulp production entering the bleach plant at the stage where chlorine or chlorine containing compounds are first introduced. Measurement of this production shall be on the basis of air-dried-tons (ADT). The Permittee shall use the demonstrated production rates of 1,124 ADT/day in determining calculated levels of AOX and chloroform for the monthly average and daily maximum discharges for the base case (Table II ).

**Table II. PRODUCTION DERIVED LIMITS FOR BLEACH PLANT DISCHARGES**

<b>BASE</b>		<b>AOX</b>			
Production Unit	ADT/Day	Mos. Avg. Factor	Daily Max. Factor	Monthly Avg.	Daily Max
	(to bleach plant)	(#/Ton)	(#/Ton)	(#/Day)	(#/Day)
Unbleached Pulp (Average Mos.)	1,124	1.246	1.902	1,400.5	2,137.8

  

<b>BASE</b>		<b>CHLOROFORM</b>			
Production Unit	ADT/Day	Mos. Avg. Factor	Daily Max. Factor	Monthly Avg.	Daily Max
	(to bleach plant)	(#/Ton)	(#/Ton)	(#/Day)	(#/Day)
Unbleached Pulp (Average Mos.)	1,124	0.00828	0.01384	9.31	15.56



## SPECIAL CONDITIONS

### S1. DISCHARGE LIMITATIONS

All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit. The discharge of any of the following pollutants more frequently than, or at a level in excess of, that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit.

#### A1. Outfall 001

Beginning on the effective date of this permit and lasting through the term of this permit, the Permittee is authorized to discharge at the permitted location subject to complying with the following limitations:

EFFLUENT LIMITATIONS: OUTFALL 001		
Parameter	Monthly Average <sup>(a)</sup>	Daily Maximum <sup>(b)</sup>
<b>Biological Oxygen Demand (BOD<sub>5</sub>), lbs/day</b>	<b>14,633</b>	<b>28,031</b>
<b>Total Suspended Solids (TSS), lbs/day</b>	<b>29,927</b>	<b>56,019</b>
<b>pH <sup>(c)</sup></b>	Daily minimum is equal to or greater than 6.0 and the daily maximum is less than or equal to 8.5	
<b>Adsorbable Organic Halides (AOX) <sup>(d)</sup>, lbs/day</b>	<b>1,401</b>	<b>2,138</b>
<b>2,3,7,8-TCDD<sup>(e)</sup>, mg/day</b>	<b>NA</b>	<b>1.31</b>
<b>Temperature<sup>(f)</sup></b>	<b>NA</b>	<b>NA</b>

<sup>(a)</sup> The average monthly effluent limitation is defined as the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. If only one sample is taken during the calendar month, the maximum daily effluent limitation applies to that sample.

<sup>(b)</sup> The maximum daily effluent limitation is defined as the highest allowable daily discharge. The daily discharge means the discharge of a pollutant measured during a calendar day. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For other units of measurement, the daily discharge is the average measurement of the pollutant over the day.

<sup>(c)</sup> Indicates the range of permitted values. When pH is continuously monitored, excursions between 5.0 and 6.0, or 9.0 and 10.0 shall not be considered violations provided no single excursion exceeds 60 minutes in

length and total excursions do not exceed 7 hours and 30 minutes per month. Any excursions below 5.0 and above 10.0 are violations. The instantaneous maximum and minimum pH shall be reported monthly.

<sup>(d)</sup> AOX is defined as adsorbable organic halides. Analysis shall be conducted in accordance with Method 1650. Adsorbable Organic Halides by Adsorption and Coulometric Titration, Revision B, October 1993, or equivalent method approved by the permitting authority. The Permittee shall report date sampled, AOX concentration (mg/L), effluent flow (MGD), AOX kg/day, and daily unbleached pulp production (ADT) to first stage bleaching.

<sup>(e)</sup> 2,3,7,8-TCDD is 2,3,7,8-tetrachlorodibenzo-p-dioxin. Analysis including sample containers and QA/QC shall be conducted in accordance with Method 1613: Tetra- through Octa- chlorinated Dioxin and Furans by Isotopic Dilution HRGC/HRMS, USEPA Office of Water, Engineering and Analysis Division, Revision A or an approved equivalent method. The Permittee must achieve a detection level less than or equal to 10 pg/L at secondary effluent. Compliance with the mass loading 2,3,7,8 TCDD daily limit shall be demonstrated if the 2,3,7,8 TCDD concentration is 10 parts per quadrillion (ppq) or less, or non-detect at a detection limit of 10 ppq or less. In the event that the sample is non-detect at a detection limit greater than minimum level, the Permittee shall re-initiate sample collection and analyze for permit compliance as defined above. The original sample(s) shall be discarded.

<sup>(f)</sup> Permittee is authorized to discharge temperature subject to the study and schedule set forth in this section.

## A.2 Bleach Plant Effluent Discharge at Effective Date

All parameters listed in this section shall be monitored at the effective date until the expiration of the permit.

		EFFLUENT LIMITATIONS	BLEACH PLANT DISCHARGE
Parameter	Units	Monthly Average <sup>(a)</sup>	Daily Maximum <sup>(b)</sup>
2,3,7,8-TCDD <sup>(d)</sup>	pg/L	NA	<ML <sup>(c)</sup> (10)
2,3,7,8-TCDF <sup>(e)</sup>	pg/L	NA	31.9
Chloroform <sup>(f), (g)</sup>	lbs./day	9.31	15.56
Trichlorosyringol	µg/L	NA	<ML <sup>(c)</sup> (2.5)
3,4,5-trichlorolcatechol	µg/L	NA	<ML <sup>(c)</sup> (5.0)
3,4,6-trichlorolcatechol	µg/L	NA	<ML <sup>(c)</sup> (5.0)
3,4,5-trichlorolguaiacol	µg/L	NA	<ML <sup>(c)</sup> (2.5)
3,4,6-trichlorolguaiacol	µg/L	NA	<ML <sup>(c)</sup> (2.5)
4,5,6-trichlorolguaiacol	µg/L	NA	<ML <sup>(c)</sup> (2.5)
2,4,5-trichlorolphenol	µg/L	NA	<ML <sup>(c)</sup> (2.5)
2,4,6-trichlorolphenol	µg/L	NA	<ML <sup>(c)</sup> (2.5)
Tetrachlorocatechol	µg/L	NA	<ML <sup>(c)</sup> (5.0)
Tetrachloroguaiacol	µg/L	NA	<ML <sup>(c)</sup> (5.0)
2,3,4,6-tetrachlorolphenol	µg/L	NA	<ML <sup>(c)</sup> (5.0)
Pentachlorophenol		NA	<ML <sup>(c)</sup> (2.5)

- (a) The average monthly effluent limitation is defined as the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. If only one sample is taken during the calendar month, the maximum daily effluent limitation applies to that sample.
- (b) The maximum daily effluent limitation is defined as the highest allowable daily discharge. The daily discharge means the discharge of a pollutant measured during a calendar day. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For other units of measurement, the daily discharge is the average measurement of the pollutant over the day.
- (c) For the purpose of reporting, if a value is less than the minimum level (ML), the Permittee shall report the minimum level for the parameter. ML represents the minimum level (as defined in 40 CFR 430.01(i)) for this pollutant.
- (d) 2,3,7,8-TCDD is 2,3,7,8-tetrachlorodibenzo-p-dioxin. Analysis including sample containers and QA/QC shall be conducted in accordance with Method 1613: Tetra- through Octa- chlorinated Dioxin and Furans by Isotopic Dilution HRGC/HRMS, USEPA Office of Water, Engineering and Analysis Division, Revision A or an approved equivalent method. The Permittee must achieve a detection level less than or equal to 10 pg/L. In the event that the sample is non-detect at a detection limit greater than minimum level, the Permittee shall re-initiate sample collection and analyze.
- (e) 2,3,7,8-TCDF is 2,3,7,8-tetrachlorodibenzofuran. Analysis including sample containers and QA/QC shall be conducted in accordance with Method 1613: Tetra- through Octa- chlorinated Dioxin and Furans by Isotopic Dilution HRGC/HRMS, USEPA Office of Water, Engineering and Analysis Division, Revision A or an approved equivalent method. The Permittee must achieve a detection level less than or equal to 10 pg/L. In the event that the sample is non-detect at a detection limit greater than minimum level, the Permittee shall re-initiate sample collection and analyze for permit compliance as defined above.
- (f) Analysis for chloroform shall be conducted in accordance with EPA Method 624 or equivalent. The Permittee shall report date sampled, chloroform concentration (mg/L), bleach plant effluent flow (MGD), lbs/day chloroform, and daily unbleached pulp production (ADT) to first stage bleaching..
- (g) The twenty-four hour composite sampling for chloroform shall consist of a minimum of four individual samples collected during a twenty-four hour period and quantitatively composited in the laboratory. The Permittee shall include a detailed description of the method used to composite the samples with the first report, and with subsequent reports where there is a modification of the compositing method. If an automated continuous or grab compositing device is used, the report shall include a description of the system and the name of the manufacturer.

### A.3 Monitoring Schedule at Effective Date

#### K4 and K5 Bleached Plants

Category	Parameter	Units	Sample Point (Point of Compliance)	Minimum Sampling Frequency	Sample Type
Wastewater Effluent	Flow	MGD	Final Effluent	Daily	Continuous Recording <sup>(e)</sup>
	BOD <sub>5</sub> <sup>(c)</sup>	mg/L	Final Effluent	Daily	24-hour Composite
	COD	mg/L	Final Effluent	Weekly <sup>(g)</sup>	24-hour Composite
	TSS	mg/L	Final Effluent	Daily	24-hour Composite

Category	Parameter	Units	Sample Point (Point of Compliance)	Minimum Sampling Frequency	Sample Type
	pH	Standard Units	Final Effluent	Daily	Continuous Recording <sup>(e)</sup>
	Temperature	°C	Final Effluent	Daily	Continuous Recording <sup>(e)</sup>
	Kraft Pulp Production	ADT/Day	To the Bleach Plant	Daily	
	Paper Production	MDT/Day	At the Reel	Daily	
	AOX	mg/L	Final Effluent	Daily <sup>(a)</sup>	24-hour Composite
	2,3,7,8-TCDD	pg/L	At K4 and K5 Bleached Plant	Monthly	24-hour Composite
	2,3,7,8-TCDD	pg/L	Final Effluent	Semi-annual	24-hour composite
	2,3,7,8-TCDF	pg/L	Final Effluent	Semi-annual	24-hour composite
	2,3,7,8-TCDF	pg/L	At K4 and K5 Bleached Plant	Monthly	24-hour Composite
	Chloroform <sup>(d)</sup>	µg/L	At K4 and K5 Bleached Plant	Weekly	24-hour Composite

Category	Parameter	Units	Sample Point (Point of Compliance)	Minimum Sampling Frequency	Sample Type
Waste-water Effluent	Trichlorosyringol	µg/L	At K4 and K5 Bleached Plant	Monthly	24-hour Composite
	3,4,5-trichlorolcatechol				
	3,4,6-trichlorolcatechol				
	3,4,5-trichlorolguaiacol				
	3,4,6-trichlorolguaiacol				
	4,5,6-trichlorolguaiacol				
	2,4,5-trichlorolphenol				
	2,4,6-trichlorolphenol				
	Tetrachlorocatechol				
	Tetrachloroguaiacol				
	2,3,4,6-tetrachlorophenol				
	Pentachlorophenol				
Sludge	2,3,7,8-TCDD <sup>(f)</sup>	ng/kg	Primary/ Secondary Sludge	Quarterly	Grab
	2,3,7,8-TCDF <sup>(f)</sup>				

<sup>(a)</sup> The frequency for monitoring AOX shall immediately decrease to that required by federal regulation if the requirements of the federal regulations are changed to a less frequent requirement. If no changes to the federal requirements occur, AOX monitoring frequency shall be reduced to weekly testing five years from the effective date of the permit as allowed in 63 FR 18572, April 15, 1998.

<sup>(b)</sup> As described in 40 CFR Part 430, machine dry tons are based on normal moisture content at the reel for each paper machine. Machine tons are on the basis of gross production at the reel.

<sup>(c)</sup> BOD composite samples shall be refrigerated in the dark at 4°C. Changes to existing sampling system shall be reviewed and approved by Ecology prior to implementation.

<sup>(d)</sup> Upon satisfactory demonstration of compliance with the chloroform standard, and upon certification of 100% ClO<sub>2</sub> substitution for Cl<sub>2</sub> in the bleaching process, chloroform testing frequency shall be reduced as provided for by EPA regulation. The chloroform testing frequency shall be revised per the new regulatory schedule or decreased to annually after certification of 100% ClO<sub>2</sub> substitution.

<sup>(e)</sup> Continuous means uninterrupted except for brief periods of time for calibration, power failure, or for unanticipated equipment repairs or maintenance.

<sup>(f)</sup> 2,3,7,8-TCDD is 2,3,7,8-tetrachlorodibenzo-p-dioxin and 2,3,7,8-TCDF is 2,3,7,8 tetrachlorodibenzofuran. Analysis including sample containers and QA/QC shall be conducted in accordance with Method 1613: Tetra-through Octa- chlorinated Dioxin and Furans by Isotopic Dilution HRGC/HRMS, USEPA Office of Water, Engineering and Analysis Division, Revision A or an approved equivalent method.

<sup>(g)</sup> Monitoring weekly shall begin with 12 months after the effective date of the permit after the Permittee's laboratory accredited.

B. Outfall 002

Beginning on the effective date of this permit and lasting through the term of this permit, the Permittee is authorized to discharge at the permitted location subject to complying with the following limitations:

EFFLUENT LIMITATIONS: OUTFALL 002		
Parameter	Monitoring Frequency	Sample Type
pH <sup>(a)</sup>	Daily minimum is equal to or greater than 6 and the daily maximum is less than or equal to 9.5	
Flow, MGD	Continuous <sup>(b)</sup>	Recording
<p><sup>(a)</sup> Indicates the range of permitted values. When pH is continuously monitored, excursions between 5.0 and 6.0, or 9.0 and 10.5 shall not be considered violations provided no single excursion exceeds 60 minutes in length and total excursions do not exceed 7 hours and 30 minutes per month. Any excursions below 5.0 and above 10.5 are violations. The instantaneous maximum and minimum pH shall be reported monthly.</p> <p><sup>(b)</sup> Continuous means uninterrupted except for brief periods of time for calibration, power failure, or for unanticipated equipment repairs or maintenance.</p>		

C. Outfall 003

Beginning on the effective date of this permit and lasting through November 30, 2003, the Permittee shall obtain all necessary permits from the permitting authorities for a construction of the merge of Outfall 003 to 001. The discharge of Outfall 003 to Washougal River will be eliminated. The merge will allow Outfall 003 discharge; i.e., an intermittent well fill sand trap purge, to be treated by the wastewater treatment system, which will provide a primary and secondary treatment prior to discharge to the Columbia River via Outfall 001.

D. Water Supply Plant Discharges to Blue Creek

This permit does not include requirements concerning the water supply plant wastewater, since requirements placed in the previous permit resulted in the Permittee appealing to the State Pollution Control Hearings Board. The Board ruled on July 15, 1986, and Ecology subsequently appealed to Thurston County Superior Court. If a BPJ analysis of discharge data determines that a cost effective alternative exists, a discharge limit may be set.

E. Mixing Zone Descriptions and Dilution Ratio Study Upgrade for Outfall 001

The Permittee is authorized to discharge within the mixing zone for Outfall 001, which is defined as follows: (1) the mixing zone shall not extend in the down stream direction for a distance of greater than 345 feet nor extend upstream for a distance over 100 feet from the point of discharge. It shall not be wider than 100 feet, and (2) a zone where acute criteria may be exceeded shall not extend in the downstream direction for a

distance greater than 35 feet nor extend upstream distance for a distance greater than 10 feet from the point of discharge. It shall not be wider than 100 feet. The edge of this zone shall be referred to as the acute criteria compliance boundary. This information was submitted as a requirement of the previous permit and approved by the Department.

The acute dilution is 15 to 1 and chronic dilution is 69 to 1 afforded by the above dilution zone configuration. The Permittee shall update a Dilution Ratio Study after April 16, 2001 and submit to the Department for approval within 3 years from the permit's effective date. The results of the updated study will be implemented during the next permit cycle.

F. Temperature Study

Within one hundred and eighty (180) days after the effective date of this Permit, the Permittee shall submit a plan to the Department for review and approval to study the ambient temperature of the receiving water in the vicinity of the outfall. The study shall begin within ninety (90) days of the approval of the plan.

The study plan shall meet the following minimum criteria:

- The data collection phase of the study shall occur over a period of at least 24 months duration.
- The data collection phase shall focus on collecting data during the expected critical temperature period (i.e., from June 15 through September 15).
- The data collected shall include ambient receiving water temperature measurements along transects (sampled both vertically and horizontally) to characterize receiving water conditions upstream, in areas not likely to be directly affected by the Permittee's effluent, and downstream of the Permittee's outfall mixing zone.
- In order to address concerns about lethality due to temperature caused by potential entrainment of fish in the effluent plume, the plan shall include an evaluation of the outfall in a model developed to predict immediate mixing of the effluent in the receiving water. Temperature sampling shall be conducted within the mixing zone to verify the model predictions.
- The data will be used to determine if the river is impaired for temperature, therefore the collection protocol shall be consistent with sections "4. Considerations for Data Quality and Evaluation" and "5. Criteria Used to Determine Current Water Quality Limited Segments" in the latest version (2001 revision) of the Department's Water Quality Program Policy 1-11 "Assessment of Water Quality for the Section 303(d) List."
- The study plan shall include a Quality Assurance Project Plan addressing all aspects of the study based on the protocols in, *Guidelines for Preparing Quality Assurance Project Plans*, Ecology Publication No. 01-03-003.
- Continuous ambient air monitoring data representative of the ambient air temperature in the study area shall be collected.

The Permittee shall submit quarterly summaries of the receiving water and ambient air temperature data collected during the quarter and a final report within ninety (90) days after the completion of the study.

- The final report shall include all measurements of ambient air and water temperature obtained within the scope of the study plan.
- The final report shall include a discussion of potential long-term ambient temperature monitoring location(s), sampling frequency, and an evaluation of the practicality of the implementation of a monitoring program.
- The final report shall include a recommendation, for review and approval, of upstream monitoring locations that will represent the temperature of the major volume of water above the Permittee's outfall. This will be accomplished by characterizing a transect of the river horizontally and vertically, evaluating whether stratification of the water column occurs, and making a comparison to the recommended monitoring locations.
- The final report shall compare seasonal ambient receiving water temperature data with the applicable numeric water quality criteria.
- The final report shall discuss whether the receiving water needs to be included in the State of Washington's Clean Water Act Section 303(d) list utilizing the assessment criteria established in the Water Quality Program Policy 1-11.

The Permittee shall continue to obtain temperature measurements in ambient receiving water, at the approved monitoring locations, for an additional two-year period from the submittal date of the final study report. Monitoring data must be collected that is adequate to evaluate compliance with both the current (WAC 173-201A) and proposed state water quality temperature standards. Following submittal of the final study report, receiving water temperature data shall be reported quarterly.

The permittee shall also conduct an engineering study to evaluate availability and cost of technologies to reduce the temperature of the effluent during the critical period in the receiving water. This study shall meet the requirements of Chapter 173-240-130 WAC and applicable guidance provided in the Department of Ecology document entitled "State Requirements for Submission of Engineering Reports and Plans for Industrial Wastewater Treatment Facilities." The final engineering study on the evaluation of temperature reduction technology shall be submitted to the department before the fourth year of the permit term.

The Permittee shall be deemed to comply with all effluent limitations and standards that pertain to effluent temperature and are established by this Permit as long as the Permittee complies with the requirements of this section.

G. Total Chlorine Free Feasibility Analysis

Within 36 months of permit issuance, the Permittee shall submit to the Department a comprehensive analysis of converting to a totally chlorine free (TCF) bleaching process.



This analysis shall include complete technology conversion description, itemized costs to convert, and detailed market outlook/viability for TCF product. The analysis shall specify the capital cost to convert, and the predicted product sales impacts and long term economic viability, resulting from the conversion.

H. Priority Pollutant Scan

The Permittee shall within 18 months after reaching 100% chlorine substitution in the bleach plant perform a priority pollutant scan for its wastewater effluent at outfall 001. The test method and detection levels will be in accordance with the recommendations in the latest version of the Department of Ecology's Permit Writer Manual. Testing will be done during normal operations and flow regime.

I. Sampling and Analytical Procedures

Samples and measurements taken to meet the requirements of this permit shall be representative of the volume and nature of the monitored parameters, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets, and maintenance-related conditions affecting effluent quality.

Sampling and analytical methods used to meet the water and wastewater monitoring requirements specified in this permit shall conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 CFR Part 136 or to the latest revision of *Standard Methods for the Examination of Water and Wastewater* (APHA), or, approved refinements developed by the National Council for Air and Stream Improvement (NCASI) approved by the Department unless otherwise specified in this permit or approved in writing by the Department of Ecology.

J. Flow Measurement

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the quantity of monitored flows. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements are consistent with the accepted industry standard for that type of device. Frequency of calibration shall be in conformance with manufacturer's recommendations and at a minimum frequency of at least one calibration per year. Calibration records shall be maintained for at least three years.

K. Laboratory Accreditation

All monitoring data required by the Department shall be prepared by a laboratory registered or accredited under the provisions of, *Accreditation of Environmental Laboratories*, Chapter 173-50 WAC. Flow, temperature, settleable solids, conductivity, pH, and internal process control parameters are exempt from this requirement. Conductivity and pH shall be accredited if the laboratory must otherwise be registered or accredited. The Department exempts crops, soils, and hazardous waste data from this requirement pending accreditation of laboratories for analysis of these media.

## **S2. REOPENING OF PERMIT**

This permit shall be reopened and modified within one year of the issuance of a final Columbia/Snake River temperature Total Maximum Daily Load (TMDL) to incorporate the waste load allocations (WLAs) for heat load as a limit, with appropriate monitoring and report requirements.

## **S3. REPORTING AND RECORDKEEPING REQUIREMENTS**

The Permittee shall monitor and report in accordance with the following conditions. The falsification of information submitted to the Department shall constitute a violation of the terms and conditions of this permit.

### **A. Reporting**

The first monitoring period begins on the effective date of the permit. Monitoring results shall be submitted monthly, unless otherwise specified in this permit. Monitoring test analysis and results conducted by the mill's laboratory during each monitoring period shall be summarized and reported on a Discharge Monitoring Report form provided, or forms otherwise approved, by the Department. The reports shall be submitted no later than the 15<sup>th</sup> day of the month following the completed monitoring period, except for samples sent to an outside laboratory for analysis in which case the monitoring data results shall be submitted to the Department no later than 45 days following the sampling period or other schedule subject to the Department's approval. In addition, a table shall be submitted which lists the following information, in accordance with the monitoring requirements of S.1, Section A, B, and C. The Permittee shall submit a separate quarterly report of all dioxin/furan monitoring results required by the Permit. If a result is less than the 10 ppq minimum level, the Permittee shall report the actual value detected. If the result is less than the method detection level, the Permittee shall report "less than (the numerical value of the method detection level)". The report(s) shall be sent to the Department of Ecology, Industrial Section, Olympia, Washington 98504.

All lab reports providing data for organic and metal parameters shall include the following information: (1) sample date, (2) sample location, (3) date of analysis, (4) parameter name, (5) CAS number, (6) analytical method/ number, (7) minimum level (ML), method detection limit, laboratory published quantitation level (PQL), (8) reporting units, and, (9) concentration detected.

Discharge Monitoring Report forms must be submitted monthly whether or not the facility was discharging. If there was no discharge or the facility was not operating during a given monitoring period, submit the form as required with the words "no discharge" entered in place of the monitoring results.

### **B. Records Retention**

The Permittee shall retain records of all monitoring information for a minimum of three (3) years. Such information shall include all calibration and maintenance records and

all original recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by the Director.

C. Recording of Results

For each measurement or sample taken, the Permittee shall record the following information: (1) the date, exact place, method, and time of sampling or measurement; (2) the individual who performed the sampling or measurement; (3) the dates the analyses were performed; (4) the individual who performed the analyses; (5) the analytical techniques or methods used; and (6) the results of all analyses.

D. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by this permit using test procedures specified by Condition S1. of this permit, then the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Permittee's DMR. This requirement shall not apply to samples taken at locations different from the specified monitoring locations, samples taken and/or tested by different analytical techniques, or tested by uncertified labs.

E. Noncompliance Notification

In the event the Permittee is unable to comply with any of the terms and conditions of this permit due to any cause, the Permittee shall:

1. Immediately take action to stop, contain, and clean up unauthorized discharges or otherwise stop the noncompliance, correct the problem and, if applicable, repeat sampling and analysis of any noncompliance immediately and submit the results to the Department within thirty (30) days after becoming aware of the violation.
2. Immediately notify the Department of the failure to comply.
3. Submit a detailed written report to the Department within thirty (30) days (five [5] days for upsets and bypasses), unless requested earlier by the Department. The report shall contain a description of the noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply.

#### **S4. OPERATION AND MAINTENANCE**

The Permittee shall, at all times, properly operate and maintain all facilities or systems of treatment and control (and related appurtenances) which are installed to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems, which are installed by a Permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

##### **A. Treatment System Operating Plan (TSOP)**

The wastewater treatment systems shall be operated according to procedures and criteria described in an operating plan. The current plan shall be updated and maintained on site within 6 months of the effective date of this permit. The plan shall include the following:

1. A baseline operating condition, which describes the operating parameters and procedures, used to meet the effluent limitations of S1 at the production levels used in developing these limitations;
2. In the event of production rates, which are below the baseline levels used to establish these limitations, the plan shall describe the operating procedures and conditions needed to maintain design treatment efficiency. The monitoring and reporting shall be described in the plan;
3. In the event of an upset, due to plant maintenance activities, severe stormwater events, startups or shutdowns, power outages, or other causes, the plan shall describe the operating procedures and conditions employed to mitigate the upset. The monitoring and reporting shall be described in the plan;
4. A description of any regularly scheduled maintenance or repair activities at the facility which would affect the volume or character of the wastes discharged to the wastewater treatment system;
5. A list including quantities and chemical composition of any maintenance-related substances (such as cleaners, degreasers, solvents, etc.) that will be discharged; and
6. A plan for monitoring and treating and/or controlling the discharge of maintenance-related materials.
7. The Permittee shall demonstrate the adequacy of the wastewater treatment system after the Cluster Rule implementation but not before April 16, 2003. A report of this demonstration will be submitted no later than October 16, 2003 to the Department for review.

The Permittee shall at all times be responsible for the proper operation and maintenance of any facilities or systems of control installed to achieve compliance with the terms and

conditions of the permit. This plan shall be update to include requirements for any major modifications of the treatment system.

**B. Bypass Procedures**

Bypass, which is the intentional diversion of waste streams from any portion of a treatment facility, is prohibited, and the Department may take enforcement action against a Permittee for bypass unless one of the following circumstances is applicable.

**1) Bypass for Essential Maintenance without the Potential to Exceed Permit Limit**

Bypass is authorized if it is for essential maintenance and does not have the potential to cause violations of limitations or other conditions of this permit, or adversely impact public health as determined by the Department prior to the bypass. The Permittee shall submit prior notice, if possible, at least ten (10) days before the date of the bypass.

**2) Bypass Which has the Potential to Exceed Permit Limit**

This bypass is permitted only if:

- a) Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass.
- b) There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment downtime.
- c) The Department submitted notices required by this section.

**3) Anticipated Bypass**

If the Permittee knows in advance of the need for a bypass which has the potential to exceed the permit limits, it shall submit prior notice at least thirty (30) days before the date of anticipated bypass. The notice shall contain (1) a description of the bypass and its cause; (2) an analysis of all known alternatives which would eliminate, reduce, or mitigate the need for bypassing; (3) a cost-effectiveness analysis of alternatives including comparative resource damage assessment; (4) the minimum and maximum duration of bypass under each alternative; (5) a recommendation as to the preferred alternative for conducting the bypass; (6) the projected date of bypass initiation; (7) a statement of compliance with SEPA; (8) a request for modification of water quality standards as provided for in WAC 173-201A-110, if an exceedance of any water quality standard is anticipated; and (9) steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass.

For probable construction bypasses, the need to bypass is to be identified as early in the planning process as possible. The analysis required above shall be considered during preparation of the engineering report or facilities plan and plans and specifications and shall be included to the extent practical. In cases where the probable need to bypass is determined early, continued analysis is necessary up to and including the construction period in an effort to minimize or eliminate the bypass.

The Department will consider the following prior to issuing an administrative order for this type bypass:

- a) If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of this permit.
- b) If there are feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.
- c) If the bypass is planned and scheduled to minimize adverse effects on the public and the environment.

After consideration of the above and the adverse effects of the proposed bypass and any other relevant factors, the Department will approve or deny the request. The public shall be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible. Approval of a request to bypass will be by administrative order issued by the Department under RCW 90.48.120.

#### 4) Unanticipated Bypass

The Permittee shall notify the Department within 24 hours of a spill, overflow, or bypass from any portion of the wastewater treatment facility, which has the potential to exceed permit limits.

#### C. Duty to Mitigate

The Permittee is required to take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

### **S5. SOLID WASTE DISPOSAL**

#### A. Solid Waste Handling

The Permittee shall handle and dispose of all solid waste material in such a manner as to prevent its entry into state ground or surface water.

B. Leachate

The Permittee shall not allow leachate from its solid waste material to enter state waters without providing all known, available and reasonable methods of treatment, nor allow such leachate to cause violations of the State Surface Water Quality Standards, Chapter 173-201A WAC, or the State Ground Water Quality Standards, Chapter 173-200 WAC. The Permittee shall apply for a permit or permit modification as may be required for such discharges to state ground or surface waters.

C. Solid Waste Control Plan

The Permittee shall submit a solid waste control plan to the Department within 3 years and 6 months from the effective date of this permit. This plan shall include all solid wastes with the exception of those solid wastes regulated by Chapter 173-303 WAC (Dangerous Waste Regulations). The plan shall include at a minimum a description, source, generation rate, and disposal methods of these solid wastes. This plan shall not be at variance with any approved local solid waste management plan. Any proposed revision or modification of the solid waste handling plan must be submitted to the Department. The Permittee shall comply with the plan and any modifications thereof.

**S6. FACILITY PLAN TO MEET BAT REQUIREMENTS**

This facility shall also be subject to the federal requirements for Best Available Technology (BAT) for bleached kraft pulp and paper in 40 CFR Part 430 Subpart B of the Clean Water Act regulations as promulgated by EPA on April 15, 1998. In addition, the Department has determined that the facility is subject to Washington State regulations for applying All Known Available and Reasonable Technology (AKART) to control toxic discharges. Further, the Department has determined that AKART shall be the same as BAT for the purposes of these permit requirements.

No later than 180 days after the approval date of the BAT implementation plan, the Permittee shall submit to the Department for review and approval two copies of engineering plans and specifications in accordance with WAC 173-240 for options described in 40 CFR Part 430, Subpart B.

**S7. NON-ROUTINE AND UNANTICIPATED DISCHARGES**

- A. Beginning on the effective date of this permit, the Permittee may discharge non-routine wastewater on a case-by-case basis if approved by the Department. Prior to any such discharge, the Permittee shall contact the Department and at a minimum provide the following information:
1. The nature of the activity that is generating the discharge.
  2. Any alternatives to the discharge, such as reuse, storage, or recycling of the water.
  3. The total volume of water expected to be discharged.

4. The results of the chemical analysis of the water. The water shall be analyzed for all constituents limited for the Permittee's discharge. The analysis shall also include hardness, any metals that are limited by water quality standards, and any other parameter deemed necessary by the Department. All discharges must comply with the effluent limitations as established in Condition S1. of this permit, water quality standards, sediment management standards, and any other limitations imposed by the Department.
  5. The date of proposed discharge and the rate at which the water will be discharged, in gallons per minute. The discharge rate shall be limited to that which will not cause erosion of ditches or structural damage to culverts and their entrances or exits.
  6. If the proposed discharge is to a municipal storm drain and is approved by the Department, the Permittee shall notify the municipality of the discharge.
- B. The discharge cannot proceed until the Department has reviewed the information provided and has authorized the discharge. Authorization from the Department will be by letter to the Permittee or by an Administrative Order.

#### **S8. SPILL PLAN**

Within 6 months after the effective date of the permit, the Permittee shall submit to the Department a spill control plan for the prevention, containment, and control of spills or unplanned discharges of: 1) oil and petroleum products, 2) materials, which when spilled, or otherwise released into the environment, are designated Dangerous (DW) or Extremely Hazardous Waste (EHW) by the procedures set forth in WAC 173-303-070, or 3) other materials which may become pollutants or cause pollution upon reaching state's waters. The Permittee shall review and update the Spill Plan, as needed, at least annually. Changes to the plan shall be sent to the Department. The plan and any supplements shall be followed throughout the term of the permit.

The updated spill control plan shall include the following:

- 1) A description of the reporting system which will be used to alert responsible managers and legal authorities in the event of a spill.
- 2) A description of preventive measures and facilities (including an overall facility plot showing drainage patterns) which prevent, contain, or treat spills of these materials.
- 3) A list of all oil and chemicals used, processed, or stored at the facility, which may be spilled into state waters.

For the purpose of meeting this requirement, plans and manuals, or portions thereof, required by 33 CFR 154, 40 CFR 109, 40 CFR 110, 40 CFR Part 112, the Federal Oil Pollution Act of 1990, Chapter 173-181, and contingency plans required by Chapter 173-303 WAC may be submitted.



## **S9. BEST MANAGEMENT PRACTICES**

The Department has determined that the Permittee is subject to the Best Management Practice (BMP) requirements for spent pulping, liquor, soap, and turpentine as defined in 40 CFR Part 430.03. This requires the Permittee to develop and implement a plan to prevent spills and leaks of spent pulping liquors, turpentine, and soap which may reach the waste water treatment system and adversely impact the system's performance. The plan is to focus on prevention measures as a first priority to insure to the extent possible that leaks or spills do not occur. In the event that a significant leak or spill does occur, the plan will provide, where necessary, for containment and diversions of the regulated substance to protect the integrity of the wastewater treatment system.

The Permittee has developed and implemented a BMP plan as provided for in 40 CFR Part 430.03 on the effective date of this permit and shall certify to the Department within 3 months of the effective date of the permit that the required plan and implementation of such have been completed.

## **S10. RECEIVING WATER STUDY**

The Permittee shall collect receiving water information necessary to determine if the effluent has a reasonable potential to cause a violation of the water quality standards. If reasonable potential exists the Department will use this information to calculate effluent limits. All sampling and analysis shall be conducted in accordance with the guidelines given in *Guidelines and Specifications for Preparing Quality Assurance Project Plans*, Ecology Publication 91-16. The Permittee shall submit a sampling and quality assurance plan for Department review within 3 years and 6 months from the effective date of this permit.

The Permittee shall initiate the study no later than 120 days from the plan submission. The Permittee shall sample and analyze the receiving water for hardness, temperature, pH, and dissolved oxygen. The following metals shall be analyzed for both total recoverable and dissolved: chromium, copper, lead, and total zinc. The time of sampling shall be as close as possible to the time of critical period. The Permittee shall follow the clean sampling techniques (*Method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels*, EPA Publication No. 821-R-95-034, April 1995). The sampling station accuracy requirements are  $\pm 20$  meters. The receiving water sampling location should be outside the zone of influence of the effluent. The Department considers ten receiving water samples to be the optimal data set and four to be the minimum, for determining reasonable potential to cause a violation of the water quality standards. All chemical analysis shall be conducted according to methods given in 40 CFR 136 and shall have the following detection levels:

POLLUTANT PARAMETER	DETECTION LIMIT REQUIRED
Chromium	1.0 µg/L
Copper	1.0 µg/L
Lead	1.0 µg/L
Total Zinc	4.0 µg/L
Ammonia (as N)	0.01 mg/L

The Permittee shall submit the results of the study to the Department within 90 days of completing the effluent and receiving water studies.

## S11. ACUTE TOXICITY

### A. Effluent Characterization

The Permittee shall conduct acute toxicity testing on the final effluent to determine the presence and amount of acute (lethal) toxicity. The two acute toxicity tests listed below shall be conducted on each sample taken for effluent characterization.

Effluent characterization for acute toxicity shall be conducted every other month for one year. Acute toxicity testing shall follow protocols, monitoring requirements, and quality assurance/quality control procedures specified in this section. A dilution series consisting of a minimum of five concentrations and a control shall be used to estimate the concentration lethal to 50% of the organisms (LC<sub>50</sub>). The percent survival in 100% effluent shall also be reported.

Testing shall begin within 60 days of the permit effective date. A written report shall be submitted to the Department within 60 days after the sample date. A final effluent characterization summary report shall be submitted to the Department within 90 days after the last monitoring test results are final. This summary report shall include a tabulated summary of the individual test results and any information on sources of toxicity, toxicity source control, correlation with effluent data, and toxicity treatability which is developed during the period of testing.

Acute toxicity tests shall be conducted with the following species and protocols:

1. Fathead minnow, *Pimephales promelas* (96 hour static-renewal test, method: EPA/600/4-90/027F).

2. Daphnid, *Ceriodaphnia dubia*, *Daphnia pulex*, or *Daphnia magna* (48 hour static test, method: EPA/600/4-90/027F). The Permittee shall choose one of the three species and use it consistently throughout effluent characterization.

B. Effluent Limit for Acute Toxicity

The Permittee has an effluent limit for acute toxicity if, after completing one year of effluent characterization, either:

1. The median survival of any species in 100% effluent is below 80%.
2. Any one test of any species exhibits less than 65% survival in 100% effluent.

If an effluent limit for acute toxicity is required by subsection B at the end of one year of effluent characterization, the Permittee shall immediately complete all applicable requirements in subsections C, D, and F.

If no effluent limit is required by subsection B at the end of one year of effluent characterization, then the Permittee shall complete all applicable requirements in subsections E and F.

**The effluent limit for acute toxicity is no acute toxicity detected in a test concentration representing the acute critical effluent concentration (ACEC).**

In the event of failure to pass the test described in subsection C. of this section for compliance with the effluent limit for acute toxicity, the Permittee is considered to be in compliance with all permit requirements for acute whole effluent toxicity as long as the requirements in subsection D. are being met to the satisfaction of the Department.

The ACEC means the maximum concentration of effluent during critical conditions at the boundary of the zone of acute criteria exceedance assigned pursuant to WAC 173-201A-100. The zone of acute criteria exceedance is authorized in Section S1 of this permit. The ACEC equals 6.3% effluent.

If no effluent limit is required by subsection B at the end of one year of effluent characterization, then the Permittee shall stop effluent characterization and begin to conduct the activities in subsection E even if the ACEC is unknown.

C. Monitoring for Compliance With an Effluent Limit for Acute Toxicity

Monitoring to determine compliance with the effluent limit shall be conducted monthly for the remainder of the permit term using each of the species listed in subsection A on a rotating basis and performed using at a minimum 100% effluent, the ACEC, and a control. The Permittee shall schedule the toxicity tests in the order listed in the permit unless the Department notifies the Permittee in writing of another species rotation schedule. The percent survival in 100% effluent shall be reported for all compliance monitoring.

Compliance with the effluent limit for acute toxicity means no statistically significant difference in survival between the control and the test concentration representing the ACEC. The Permittee shall immediately implement subsection D if any acute toxicity test conducted for compliance monitoring determines a statistically significant difference in survival between the control and the ACEC using hypothesis testing at the 0.05 level of significance (Appendix H, EPA/600/4-89/001). If the difference in survival between the control and the ACEC is less than 10%, the hypothesis test shall be conducted at the 0.01 level of significance.

D. Response to Noncompliance with an Effluent Limit for Acute Toxicity

If the Permittee violates the acute toxicity limit in subsection B, the Permittee shall begin additional compliance monitoring within one week from the time of receiving the test results. This additional monitoring shall be conducted weekly for four consecutive weeks using the same test and species as the failed compliance test. Testing shall determine the LC<sub>50</sub> and effluent limit compliance. The discharger shall return to the original monitoring frequency in subsection C after completion of the additional compliance monitoring.

If the Permittee believes that a test indicating noncompliance will be identified by the Department as an anomalous test result, the Permittee may notify the Department that the compliance test result might be anomalous and that the Permittee intends to take only one additional sample for toxicity testing and wait for notification from the Department before completing the additional monitoring required in this subsection. The notification to the Department shall accompany the report of the compliance test result and identify the reason for considering the compliance test result to be anomalous. The Permittee shall complete all of the additional monitoring required in this subsection as soon as possible after notification by the Department that the compliance test result was not anomalous. If the one additional sample fails to comply with the effluent limit for acute toxicity, then the Permittee shall proceed without delay to complete all of the additional monitoring required in this subsection. The one additional test result shall replace the compliance test result upon determination by the Department that the compliance test result was anomalous.

If all of the additional compliance monitoring conducted in accordance with this subsection complies with the permit limit, the Permittee shall search all pertinent and recent facility records (operating records, monitoring results, inspection records, spill reports, weather records, production records, raw material purchases, pretreatment records, etc.) and submit a report to the Department on possible causes and preventive measures for the transient toxicity event which triggered the additional compliance monitoring.

If toxicity occurs in violation of the acute toxicity limit during the additional compliance monitoring, the Permittee shall submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to the Department within 60 days after test results are final. The TI/RE plan shall be based on WAC 173-205-100(2) and shall be implemented in accordance with WAC 173-205-100(3).

E. Monitoring When There Is No Permit Limit for Acute Toxicity

The Permittee shall test final effluent once in the last summer and once in the last winter prior to submission of the application for permit renewal. All species used in the initial acute effluent characterization or substitutes approved by the Department shall be used, and results submitted to the Department as a part of the permit renewal application process.

F. Sampling and Reporting Requirements

1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Department's database, then the Permittee shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results.
2. Testing shall be conducted on grab samples. Samples taken for toxicity testing shall be cooled to 4 degrees Celsius while being collected and shall be sent to the lab immediately upon completion. The lab shall begin the toxicity testing as soon as possible, but no later than 36 hours after sampling was ended.
3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* or most recent version thereof.
4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in subsection A. and the Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected effluent.
5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in subsection A or pristine natural water of sufficient quality for good control performance.
6. The whole effluent toxicity tests shall be run on an unmodified sample of final effluent.
7. The Permittee may choose to conduct a full dilution series test during compliance monitoring in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the ACEC.

8. All whole effluent toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing and do not comply with the acute statistical power standard of 29% as defined in WAC 173-205-020 must be repeated on a fresh sample with an increased number of replicates to increase the power.

## S12. CHRONIC TOXICITY

### A. Effluent Characterization

The Permittee shall conduct chronic toxicity testing on the final effluent. The two chronic toxicity tests listed below shall be conducted on each sample taken for effluent characterization.

Testing shall begin within 60 days of the permit effective date. A written report shall be submitted to the Department within 60 days after the sample date. A final effluent characterization summary report shall be submitted to the Department within 90 days after the last monitoring test results are final. This summary report shall include a tabulated summary of the individual test results and any information on sources of toxicity, toxicity source control, correlation with effluent data, and toxicity treatability which is developed during the period of testing.

Effluent testing for chronic toxicity shall be conducted quarterly for one year. The Permittee shall conduct chronic toxicity testing during effluent characterization on a series of at least five concentrations of effluent in order to determine appropriate point estimates. This series of dilutions shall include the ACEC. The Permittee shall compare the ACEC to the control using hypothesis testing at the 0.05 level of significance as described in Appendix H, EPA/600/4-89/001.

Chronic toxicity tests shall be conducted with the following two species and the most recent version of the following protocols:

Freshwater Chronic Toxicity Test Species		Method
Fathead minnow	<i>Pimephales promelas</i>	EPA/600/4-91/002
Water flea	<i>Ceriodaphnia dubia</i>	EPA/600/4-91/002

### B. Effluent Limit for Chronic Toxicity

After completion of effluent characterization, the Permittee has an effluent limit for chronic toxicity if any test conducted for effluent characterization shows a significant difference between the control and the ACEC at the 0.05 level of significance using hypothesis testing (Appendix H, EPA/600/4-89/001) and shall complete all applicable requirements in subsections C, D, and F.

If no significant difference is shown between the ACEC and the control in any of the chronic toxicity tests, the Permittee has no effluent limit for chronic toxicity and only subsections E and F apply.

**The effluent limit for chronic toxicity is no toxicity detected in a test concentration representing the chronic critical effluent concentration (CCEC).**

In the event of failure to pass the test described in subsection C, of this section, for compliance with the effluent limit for chronic toxicity, the Permittee is considered to be in compliance with all permit requirements for chronic whole effluent toxicity as long as the requirements in subsection D are being met to the satisfaction of the Department.

The CCEC means the maximum concentration of effluent allowable at the boundary of the mixing zone assigned in Section S1 pursuant to WAC 173-201A-100. The CCEC equals 1.4% effluent.

C. Monitoring for Compliance With an Effluent Limit for Chronic Toxicity

Monitoring to determine compliance with the effluent limit shall be conducted quarterly for the remainder of the permit term using each of the species listed in subsection A above on a rotating basis and performed using at a minimum the CCEC, the ACEC, and a control. The Permittee shall schedule the toxicity tests in the order listed in the permit unless the Department notifies the Permittee in writing of another species rotation schedule.

Compliance with the effluent limit for chronic toxicity means no statistically significant difference in response between the control and the test concentration representing the CCEC. The Permittee shall immediately implement subsection D if any chronic toxicity test conducted for compliance monitoring determines a statistically significant difference in response between the control and the CCEC using hypothesis testing at the 0.05 level of significance (Appendix H, EPA/600/4-89/001). If the difference in response between the control and the CCEC is less than 20%, the hypothesis test shall be conducted at the 0.01 level of significance.

In order to establish whether the chronic toxicity limit is eligible for removal from future permits, the Permittee shall also conduct this same hypothesis test (Appendix H, EPA/600/4-89/001) to determine if a statistically significant difference in response exists between the ACEC and the control.

D. Response to Noncompliance With an Effluent Limit for Chronic Toxicity

If a toxicity test conducted for compliance monitoring under subsection C determines a statistically significant difference in response between the CCEC and the control, the Permittee shall begin additional compliance monitoring within one week from the time of receiving the test results. This additional monitoring shall be conducted monthly for three consecutive months using the same test and species as the failed compliance test. Testing shall be conducted using a series of at least five effluent concentrations and a control in order to be able to determine appropriate point estimates. One of these

effluent concentrations shall equal the CCEC and be compared statistically to the nontoxic control in order to determine compliance with the effluent limit for chronic toxicity as described in subsection C. The discharger shall return to the original monitoring frequency in subsection C after completion of the additional compliance monitoring.

If the Permittee believes that a test indicating noncompliance will be identified by the Department as an anomalous test result, the Permittee may notify the Department that the compliance test result might be anomalous and that the Permittee intends to take only one additional sample for toxicity testing and wait for notification from the Department before completing the additional monitoring required in this subsection. The notification to the Department shall accompany the report of the compliance test result and identify the reason for considering the compliance test result to be anomalous. The Permittee shall complete all of the additional monitoring required in this subsection as soon as possible after notification by the Department that the compliance test result was not anomalous. If the one additional sample fails to comply with the effluent limit for chronic toxicity, then the Permittee shall proceed without delay to complete all of the additional monitoring required in this subsection. The one additional test result shall replace the compliance test result upon determination by the Department that the compliance test result was anomalous.

If all of the additional compliance monitoring conducted in accordance with this subsection complies with the permit limit, the Permittee shall search all pertinent and recent facility records (operating records, monitoring results, inspection records, spill reports, weather records, production records, raw material purchases, pretreatment records, etc.) and submit a report to the Department on possible causes and preventive measures for the transient toxicity event which triggered the additional compliance monitoring.

If toxicity occurs in violation of the chronic toxicity limit during the additional compliance monitoring, the Permittee shall submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to the Department within 60 days after test results are final. The TI/RE plan shall be based on WAC 173-205-100(2) and shall be implemented in accordance with WAC 173-205-100(3).

E. Monitoring When There Is No Permit Limit for Chronic Toxicity

The Permittee shall test final effluent once in the last summer and once in the last winter prior to submission of the application for permit renewal. All species used in the initial chronic effluent characterization or substitutes approved by the Department shall be used and results submitted to the Department as a part of the permit renewal application process.



F. Sampling and Reporting Requirements

1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Department's database, then the Permittee shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results.
2. Testing shall be conducted on grab samples. Samples taken for toxicity testing shall be cooled to 4 degrees Celsius while being collected and shall be sent to the lab immediately upon completion. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling was ended.
3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* or most recent version thereof.
4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in subsection A. and the Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected effluent.
5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in subsection A or pristine natural water of sufficient quality for good control performance.
6. The whole effluent toxicity tests shall be run on an unmodified sample of final effluent.
7. The Permittee may choose to conduct a full dilution series test during compliance monitoring in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the ACEC and the CCEC.
8. All whole effluent toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing, and do not comply with the chronic statistical power standard of 39% as defined in WAC 173-205-020, must be repeated on a fresh sample with an increased number of replicates to increase the power.

### **S13. OUTFALL EVALUATION**

The Permittee shall inspect the submerged portion of the outfall line and diffuser to document its integrity and continued function within the 4 year and 6 months of the permit effective date. If conditions allow for a photographic verification, it shall be included in the report. The inspection report shall be submitted to the Department within 180 calendar days prior to the permit expiration date.

### **S14. OTHER REQUIREMENTS AND PROVISIONS**

#### **A. Upset Defense Provisions**

The Upset provisions listed in 40 CFR Section 122.41(n) shall apply to activities performed pursuant to this Permit.

#### **B. Permit Continuation**

The conditions in this permit shall continue in force beyond the expiration date and until the effective date of a new permit if the Permittee submits a timely application for renewal and meets the other conditions outlined in 40 CFR 122.6 and WAC 173-220-180 (5).

### **S15. STORMWATER DISCHARGE LIMITATIONS AND MONITORING**

The Permittee collects, treats, and discharges stormwater as part of the process discharge and has met all of required planning and monitoring requirements. Stormwater at the Specialty Minerals property is collected and discharged to the Fort James treatment system. Stormwater discharge limitations are consistent with and incorporated in the process effluent discharge limitations.

## **GENERAL CONDITIONS**

### **G1. SIGNATORY REQUIREMENTS**

All applications, reports, or information submitted to the Department shall be signed and certified.

- A. All permit applications shall be signed by either a responsible corporate officer of at least the level of vice president of a corporation, a general partner of a partnership, or the proprietor of a sole proprietorship.
- B. All reports required by this permit and other information requested by the Department shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
  - 1. The authorization is made in writing by a person described above and submitted to the Department, and
  - 2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)
- C. Changes to authorization. If an authorization under paragraph B.2 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of B.2. must be submitted to the Department prior to or together with any reports, information, or applications to be signed by an authorized representative.
- D. Certification. Any person signing a document under this section shall make the following certification:

“I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

### **G2. RIGHT OF ENTRY**

The Permittee shall allow an authorized representative of the Department, upon the presentation of credentials and such other documents as may be required by law:

- C. To enter upon the premises where a discharge is located or where any records must be kept under the terms and conditions of this permit;
- D. To have access to and copy at reasonable times any records that must be kept under the terms of the permit;
- E. To inspect at reasonable times any monitoring equipment or method of monitoring required in the permit;
- F. To inspect at reasonable times any collection, treatment, pollution management, or discharge facilities; and
- G. To sample at reasonable times any discharge of pollutants.

### **G3. PERMIT ACTIONS**

This permit shall be subject to modification, suspension, or termination, in whole or in part by the Department for any of the following causes:

- A. Violation of any permit term or condition;
- B. Obtaining a permit by misrepresentation or failure to disclose all relevant facts;
- C. A material change in quantity or type of waste disposal;
- D. A material change in the condition of the waters of the state; or
- E. Nonpayment of fees assessed pursuant to RCW 90.48.465.

The Department may also modify this permit, including the schedule of compliance or other conditions, if it determines good and valid cause exists, including promulgation or revisions of regulations or new information.

### **G4. REPORTING A CAUSE FOR MODIFICATION**

The Permittee shall submit a new application, or a supplement to the previous application, along with required engineering plans and reports, whenever a material change in the quantity or type of discharge is anticipated which is not specifically authorized by this permit. This application shall be submitted at least 60 days prior to any proposed changes. Submission of this application does not relieve the Permittee of the duty to comply with the existing permit until it is modified or reissued.

### **G5. PLAN REVIEW REQUIRED**

Prior to constructing or modifying any wastewater control facilities, an engineering report and detailed plans and specifications shall be submitted to the Department for approval in accordance with Chapter 173-240 WAC. Engineering reports, plans, and specifications should be submitted at least 180 days prior to the planned start of construction. Facilities shall be constructed and operated in accordance with the approved plans.

## **G6. COMPLIANCE WITH OTHER LAWS AND STATUTES**

Nothing in the permit shall be construed as excusing the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

## **G7. DUTY TO REAPPLY**

The Permittee must apply for permit renewal at least 180 days prior to the specified expiration date of this permit.

## **G8. PERMIT TRANSFER**

This permit is automatically transferred to a new owner or operator if:

- C. A written agreement between the old and new owner or operator containing a specific date for transfer of permit responsibility, coverage, and liability is submitted to the Department;
- D. A copy of the permit is provided to the new owner and;
- E. The Department does not notify the Permittee of the need to modify the permit.

Unless this permit is automatically transferred according to section A. above, this permit may be transferred only if it is modified to identify the new Permittee and to incorporate such other requirements as determined necessary by the Department.

## **G9. REDUCED PRODUCTION FOR COMPLIANCE**

The Permittee, in order to maintain compliance with its permit, shall control production and/or all discharges upon reduction, loss, failure, or bypass of the treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

## **G10. REMOVED SUBSTANCES**

Collected screenings, grit, solids, sludge, filter backwash, or other pollutants removed in the course of treatment or control of wastewater shall not be re-suspended or reintroduced to the final effluent stream for discharge to state waters.

## **G11. TOXIC POLLUTANTS**

If any applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Clean Water Act for a toxic pollutant and that standard or prohibition is more stringent than any limitation upon such pollutant in the permit, the Department shall institute proceedings to modify or revoke and reissue the permit to conform to the new toxic effluent standard or prohibition.

**G12. OTHER REQUIREMENTS OF 40 CFR**

All other requirements of 40 CFR 122.41 and 122.42 are incorporated in this permit by reference.

**G13. ADDITIONAL MONITORING**

The Department may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

**G14. PAYMENT OF FEES**

The Permittee shall submit payment of fees associated with this permit as assessed by the Department. The Department may revoke this permit if the permit fees established under Chapter 173-224 WAC are not paid.

**G15. PENALTIES FOR VIOLATING PERMIT CONDITIONS**

Any person who is found guilty of willfully violating the terms and conditions of this permit shall be deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to ten thousand dollars and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit shall incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars for every such violation. Each and every such violation shall be a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be and be deemed to be a separate and distinct violation.